
Chapter 18

Cross Section Sheets

18.1 Objectives	18-1
18.2 Accessing	18-1
18.3 Dialog.....	18-2
18.3.1 XS DGN.....	18-2
18.3.2 Earthwork Quantities	18-3
18.3.3 Sheet DGN File.....	18-4
18.3.4 Add Elevations.....	18-4
18.3.5 Files Menu	18-5
18.3.6 Process Cross Sections.....	18-5
18.4 Example 18-1	18-7

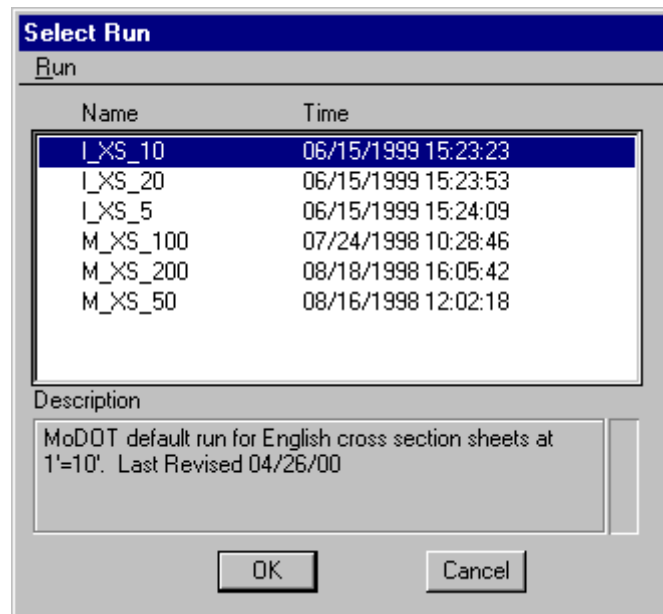
18.1 Objectives

- Learn the procedures for laying out cross-section sheets.

18.2 Accessing

Prior to beginning the cross-section sheet layout process, the user will need to create a cross-section sheet file. There are six seed files the user can choose from when setting up the cross-section sheet file: i_xs_shts_5.dgn, i_xs_shts_10.dgn, i_xs_shts_20.dgn, m_xs_shts_100.dgn, m_xs_shts_200.dgn, and m_xs_shts_50.dgn. The user should choose the seed file that represents the scale the cross-sections will be plotted at.

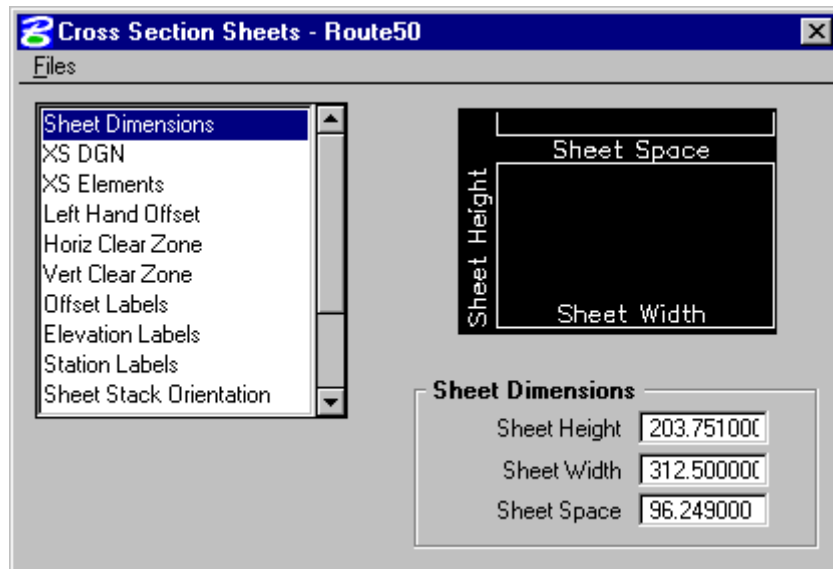
To access the necessary dialogs needed to process the cross-section sheet layout, select **Project Manager >> Cross Section Sheets**. The run should be chosen according to the scale that the cross-sections will be plotted at.



Once the run is chosen, the dialog box shown below appears.

Chapter 18 Cross Section Sheets

18.3 Dialog

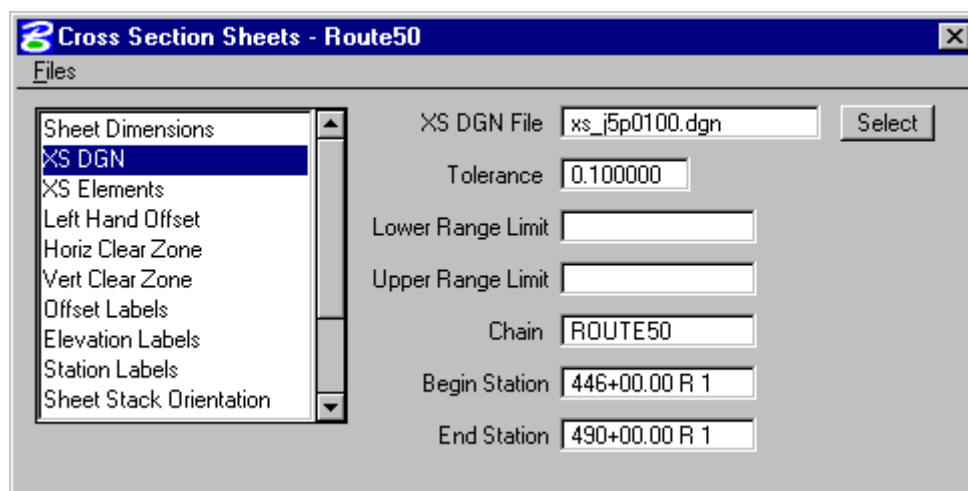


The left side of the dialog contains the list of parameters required to draw the cross section sheets. When each parameter is selected, the dialog changes the key-in fields to reflect the selection.

Most of the parameters should be left alone. They are setup by the CADD Support Center, and are correct for the given scales. Listed below are the items the user will need to change.

18.3.1 XS DGN

XS DGN defines the file in which the cross-sections are located, the baseline chain, and the station limits.



18.3.2 Earthwork Quantities

Earthwork Quantities allows the user define the ASCII file that contains the earthwork quantity information, as well as toggle on/off the plotting of the earthwork quantities. If the **Sheet Quantities** portion of the earthwork run was not changed, the user should not change anything else in this dialog.

Cross Section Sheets - Route50

Files

- Horiz Clear Zone
- Vert Clear Zone
- Offset Labels
- Elevation Labels
- Station Labels
- Sheet Stack Orientation
- Sheet Stack Single/Double
- Earthwork Quantities**
- Sheet DGN File
- Add Elevations

☒ Earthwork Quant. Define

Ascii File:

ID	Horiz Off	Vert Off	Angle	Plot
1	291.2500	10.00000	0.0	Y
2	291.2500	7.600000	0.0	Y
3	124.2500	-7.60000	0.0	Y
4	188.2500	-7.60000	0.0	Y
5	291.2500	5.200000	0.0	Y

Column Data

ItemId: Horiz. Offset:

Angle: Vert. Offset:

☐ Plot Parameters Define

Plot Parameter

Level: Weight:

Color: Font:

TH: TW:

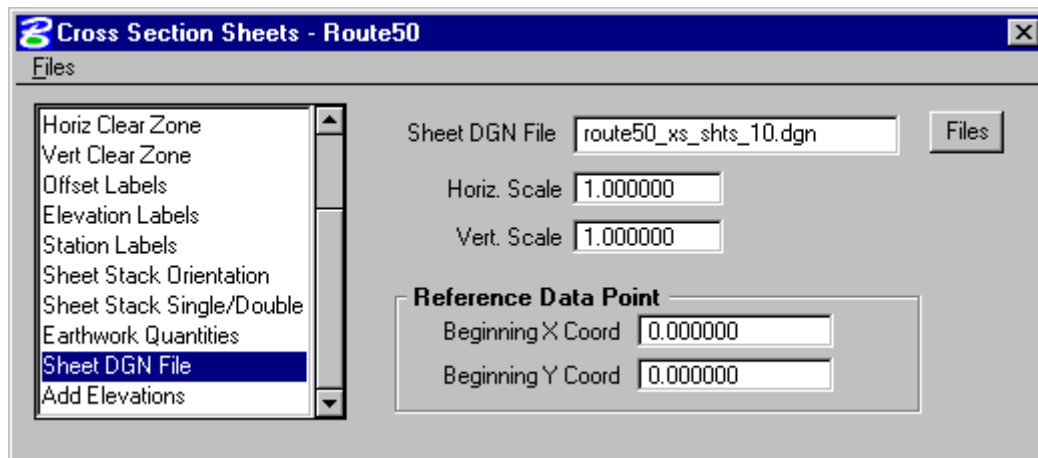
Justification

Chapter 18 Cross Section Sheets

18.3.3 Sheet DGN File

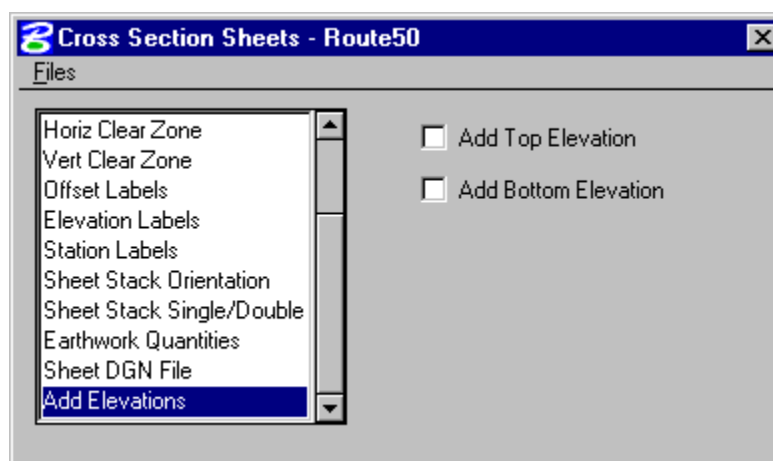
The **Sheet DGN File** specifies which file the cross-section sheets will be placed in. (Currently, the path to the Sheet DGN File including the file name is limited to 40 characters. By using the working directory, the user can specify only the file name in the Sheet DGN File field to increase the length of the file name.)

The Horizontal and Vertical Scales should be left at 1.0 regardless of what scale is being plotted. The Reference Data Point coordinate should be left at 0, 0.



18.3.4 Add Elevations

Using the toggles **Add Top Elevation** and **Add Bottom Elevation** located in the **Add Elevations** section, the user can plot the elevation above and/or below the cross section elements.



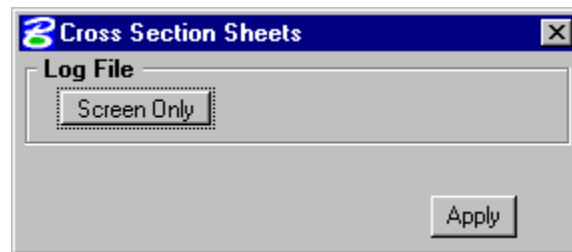
18.3.5 Files Menu



From the **Files** menu, the **Run** option will process all parameters that have been set in the **Cross Section Sheets** dialog box. The **Save Settings** option will save all information in the **Cross Sections Sheets** dialog box. The **Export** option will allow the user to save the parameters in the **Cross Section Sheets** dialog box as an ASCII input file. The **Exit** option will exit the **Cross Sections Sheets** dialog box.

18.3.6 Process Cross Sections

Once the dialog box is complete, the user can select **File >> Run** and the following dialog box will appear.

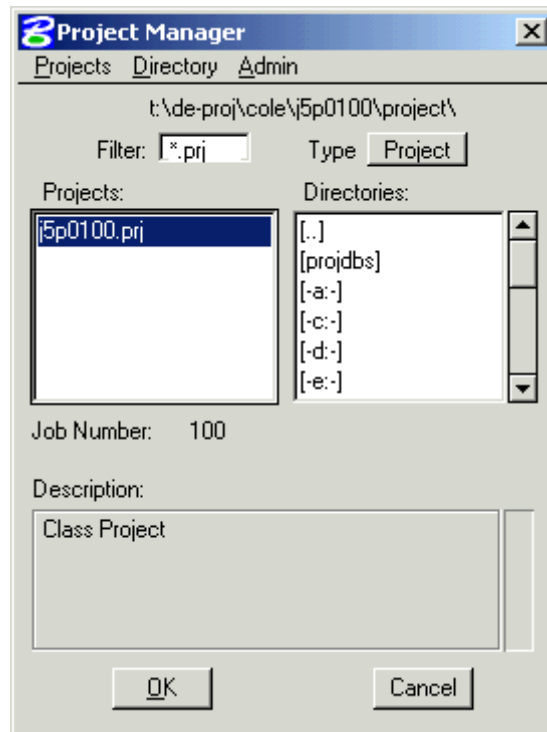


The user can display the results to the screen only, or write them to a log file. Once the **Apply** button is selected, the cross-sections will be plotted in sheet format.

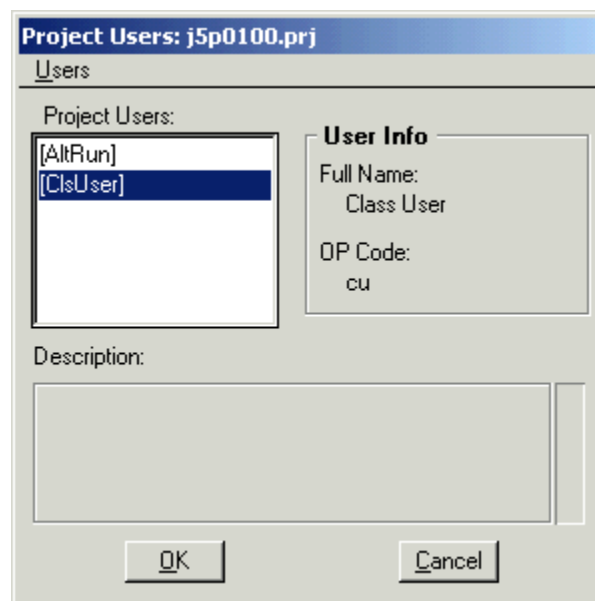
18.4 Example 18-1

1. Open the MicroStation file
t:\de-proj\cole\5p0100\data\rte50_xs_j5p0100.dgn.

2. Open the project **t:\de-proj\cole\5p0100\project\j5p0100.prj.**

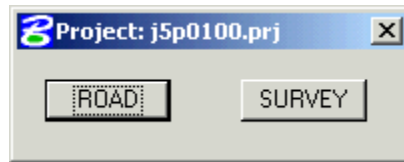


3. Select the user **ClsUser**.



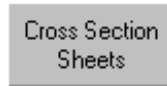
Example 18-1 Cross Section Sheets

4. Enter **Road**.

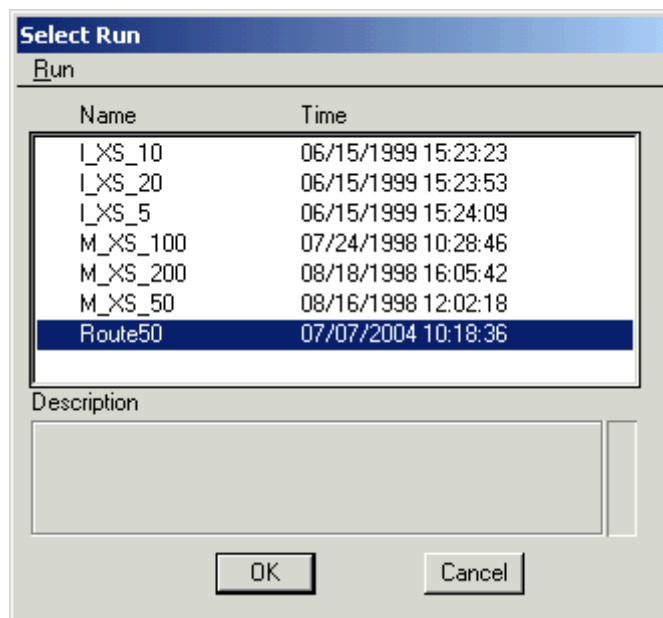


5. Select the **Route50** working alignment.

6. Choose **Cross Section Sheets** from the **Road Project** dialog.



Copy the **I_XS_10** run to **Route63** and open the **Route50** run.



7. Create a new MicroStation file in **t:\de-proj\cole\5p0100\data** using the seed file:

t:\standard\wsmod\design\seed-i\i_10_xs_100_sheets.dgn

Name the file **rte50_xs_sheets.dgn**.

Example 18-1 Cross Section Sheets

8. Be sure the following items are set in the **XS DGN File** sections of the dialog:

XS DGN File: **rte50_xs_j2p0200.dgn**

Baseline: **ROUTE50**

Cross Section Sheets - Route50

Files

Sheet Dimensions
XS DGN
XS Elements
Left Hand Offset
Horiz Clear Zone
Vert Clear Zone
Offset Labels
Elevation Labels
Station Labels
Sheet Stack Orientation

XS DGN File:

Tolerance:

Lower Range Limit:

Upper Range Limit:

Chain:

Begin Station:

End Station:

9. In the **Earthwork Quantities** section, turn on the **Earthwork Quant. Define** option, and choose the ASCII file of **EARTH-LABELS.TXT**.

Cross Section Sheets - Route50

Files

Horiz Clear Zone
Vert Clear Zone
Offset Labels
Elevation Labels
Station Labels
Sheet Stack Orientation
Sheet Stack Single/Double
Earthwork Quantities
Sheet DGN File
Add Elevations

☒ Earthwork Quant. Define

Ascii File:

ID	Horiz Off	Vert Off	Angle	Plot
1	291.2500	10.00000	0.0	Y
2	291.2500	7.600000	0.0	Y
3	124.2500	-7.60000	0.0	Y
4	188.2500	-7.60000	0.0	Y
5	291.2500	5.200000	0.0	Y

Column Data

ItemId: Horiz. Offset:

Angle: Vert. Offset:

☐ Plot Parameters Define

Plot Parameter

Level: Weight:

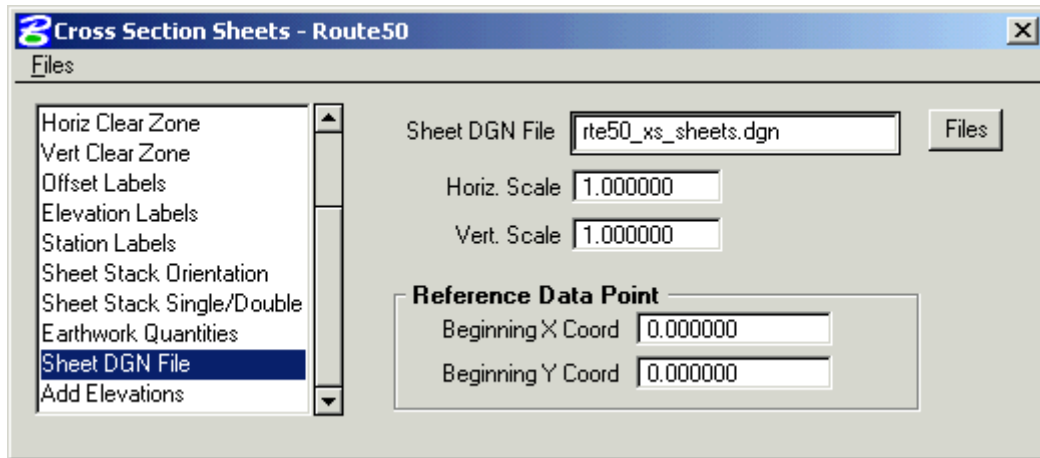
Color: Font:

TH: TW:

Justification

Example 18-1 Cross Section Sheets

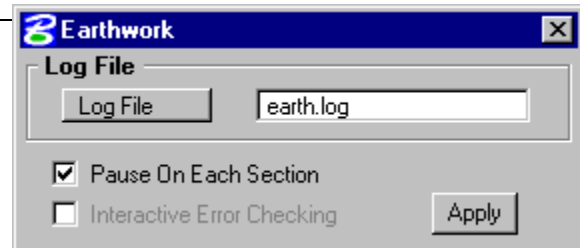
10. Select the **Sheet DGN File** to be the file **rte50_xs_sheets.dgn** created in step 7.



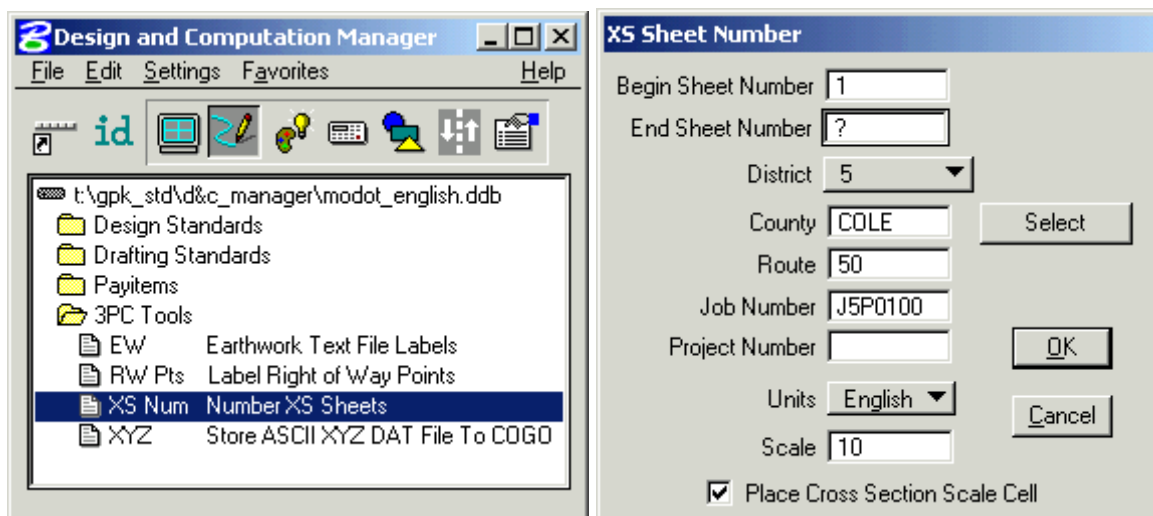
11. Save the settings for the dialog.

Run the proposed cross-sections.

Set the **Log File** to **Screen Only**.



12. To add the title block information, open **Design and Computation Manager** and navigate to the **3PC Tools**. Double click on **XS Num Number XS Sheets** and fill out the dialog as shown except enter the appropriate value in the **End Sheet Number**.



Click **OK** and data point inside the border for the first sheet as indicated in the **Prompt** dialog shown below:

